

Claims

- [c1] 1. An apparatus for use for volatile organic compound laden waste water management and destroying organic compounds, comprising:
- a main hollow body, having a first and second end;
 - a photo-reactor plate that traps UV light, placed in communication with said first end;
 - a series of bracing members attached to the exterior of said main hollow body so as to support and prevent damage to said photo-reactor plate;
 - a slotted opening in fixed communication with said first end to receive said photo-reactor plate; and
 - a series of tubing communicating with said second end of said main body.
- [c2] 2. The apparatus of claim 1, wherein said photo-reactor plate is made of Acrylic SOP of 16 wt, which is a double skinned acrylic sheet that is approximately 1200 mm wide.
- [c3] 3. The apparatus of claim 1, wherein said series of tubing is made of Acrylic SOP of 16 wt, which is a double skinned acrylic sheet that is approximately 1200 mm wide

[c4] 4. An apparatus for use with volatile organic compound laden waste water management, comprising:
a main hollow body, having a first end and a second end, and configured to communicate with volatile organic compound laden waste water;
a photo-reactor plate that traps UV light, placed in communication with said first end,
a series of bracing members attached to the exterior of said main hollow body, said series of bracing members having curved bottoms and vertical upper portions;
a photo-catalyst, introduced into said volatile organic compound laden waste water, configured to communicate with said photo-reactor plate;
a slotted opening in fixed communication with said first end; and
a series of tubing communicating with said second end of said main body.

[c5] 5. A method of neutralizing volatile organic compound laden waste water and destroying organic compounds, comprising:
running volatile organic compound laden waste water into a photo-reactor plate;
infusing the volatile organic compound laden waste water with a photo-catalyst;
penetrating the photo-reactor plate with ultraviolet light;

and

preventing the ultraviolet light from escaping the photo-reactor plate.